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AMENDMENTS TO THE DRAWINGS

None.

REMARKS

The Claim Amendments

Claims 1, 4, 7, and 10 have been amended to more particularly set forth the step of creating the billet shape, and claims 1 and 7 have been further amended to more particularly set forth the step of positioning the billet. Support for the claim amendments is found in the specification and drawings of the application as originally filed.

The Rejections Of The Claims 1-12 Should Be Withdrawn

Claims 1-12 have been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,321,923 to Wood in combination with U.S. Patent No. 3,963,396 to Shotbolt et al. As will be pointed out below, these patents do not teach or suggest the claimed shaping, orienting and positioning of the billet relative to the mold parts as set forth in the amended claims, and that the cited prior art does not appreciate the importance of such process steps.

Of the twelve pending claims, only claims 1 and 7 are independent. Both claims 1 and 7 have been amended to set forth the steps of, inter alia, (1) creating a billet in the form of a non-symmetrical shape having a large end and a small end, and (2) positioning the billet in a predetermined orientation with (a) the small end adjacent, and extending over a portion of, the first mold part third surface region, (b) the large end adjacent, and extending over a portion of, the first mold part first surface region, and (c) at least a portion of the billet disposed adjacent the first mold part second surface region.

Independent claim 1 of the instant application sets forth a preferred method for making a closure having a body, a lid, and a hinge (connecting the body and lid) by a

method employing two mold parts which together define the body region, hinge region, and lid region. A billet with a predetermined shape is created from a melt of thermoplastic material and is positioned in the predetermined orientation prior to closing the mold parts. Independent claim 7 sets forth a similar process, but the process is not limited to a process for making a closure per se.

In the instant application specification, on page 21, in lines 16-21, the advantage of the invention for use in making a closure is described as follows:

“According to the present invention, the billet 60 is positioned adjacent the hinge area of the mold parts so that the thermoplastic material needs only a slight amount of lateral flow to completely fill the relatively thin region of the mold cavity. This assures that the hinge region will be quickly and completely filled with the necessary amount of thermoplastic material.”

Further, as set forth in the instant application specification on page 24, lines 23-25, the thermoplastic material does not have to flow very far to fully and completely occupy the mold cavity region defining the hinge.

Also, as set forth in the instant application specification on page 24, line 30, to page 25, lines 1-7, “Very little, or no, thermoplastic material needs to flow during the compression molding step through the hinge region from either the lid region to the body region or from the body region to the lid region. The molten plastic from the different portions of the compressed billet 60A can quickly flow directly to the surrounding regions of the mold cavity so as to properly distribute the thermoplastic material to completely fill in all the void volume within the mold regions with no wasted material....”

In a particularly preferred form of the invention for making a closure. FIG. 11 illustrates the billet of thermoplastic material provided with (1) a large end adjacent, and

extending into, the closure body region of the mold parts (wherein the closure body to be formed requires a larger volume of thermoplastic material), and (2) a small end adjacent, and extending into, the lid region of the mold parts (wherein the closure lid to be formed requires a smaller volume of thermoplastic material). This is described in detail in the instant application specification on page 20, lines 28-30, and page 21, lines 1-8.

The cited prior art does not teach or suggest any of the above-discussed features of the present invention. The cited prior patent to Wood discloses merely a unitary closure molded from thermoplastic material but does not disclose a particular molding process.

The Examiner cites Shotbolt in making a somewhat general rejection. The Examiner refers to column 4 of Shotbolt, but column 4 teaches merely placing the pellet “exactly in the center” of the closure (and the pellet provides only a “lining” for an existing closure). The instant invention is not obvious in view of Shotbolt and Wood for a number of reasons.

(1) First, to some extent, Shotbolt teaches away from the present invention by teaching the use of an existing closure that is presumably molded by heretofore conventional means, and then using a pellet only to provide a liner for the existing closure. Shotbolt does not teach making the closure from a pellet.

(2) Further, Shotbolt does not teach using a pellet with a specific shape other than a uniform cylindrical shape. Lines 21-25 of column 5 of Shotbolt describe how FIG. 2 shows that the leading end of a cylindrical rod 6 (the top end of the rod 6 in FIG. 2) is severed by a rotary cutter blade 9 to form a pellet 6'. The various figures in the Shotbolt patent, including the top end plan view in FIG. 9, show that the rod 6 and cut-off pellet 6' are perfectly cylindrical. There is no teaching to provide a specially

shaped pellet in a particular orientation in a mold as part of a process of molding a closure.

(3) The Examiner is using hindsight to say, as he does on page 4 of the Official Action, that it would have been obvious to position a billet in a predetermined orientation with at least a portion of the billet disposed adjacent a first mold part second surface region because such positioning of the pellet as taught by Shotbolt in the process of Wood results in the pellet being placed in part of the mold where the hinge is molded. First, the prior art Wood patent cited by the Examiner does not teach molding a closure by compressing a billet or pellet. Second, Shotbolt does not teach or suggest that a pellet can be used to mold a closure by putting the pellet in a mold at a location where the hinge will be. On the contrary, Shotbolt, to the extent that it suggests anything about molding a closure, merely suggests depositing “the pellet exactly in the center of, and in contact with, the pre-heated inner face of the [existing] closure....” (See Shotbolt, column 4, line 46.)

(4) The Examiner appears to have ignored some of the more specific aspects of forms of the invention as set forth in the dependent claims, such as in claim 4 which sets forth the use of an egg-shaped billet and claim 6 which sets forth the step of making the billet by extruding the melt through an oval shaped exit orifice.

In contrast, the instant application includes a set of claims in which the only independent claims are claims 1 and 7, and each of those independent claims 1 and 7 specifically sets forth a unique step of positioning the billet having a “predetermined shape” in a “predetermined orientation” with at least a portion of the billet “disposed

adjacent” a “second surface region” of a mold part (that has (1) a first surface region defining a first side of a first portion of the article or closure body, (2) a second surface region defining a first side of a second portion of the article or closure hinge, and (3) a third surface region defining a first side of a third portion of the article or closure lid).

In view of the fact that none of the cited prior art patents remotely teaches or suggests the novel billet shaping, orienting, and positioning steps of the process of the present invention as set forth in independent claims 1 and 7 of the instant application, withdrawal of the rejection of the independent claims 1 and 7 is respectfully requested.

Further, in view of the fact that claims 2-6 and 8-12 are each directly or indirectly dependent on one or the other of the above-discussed independent claims 1 and 7, such dependent claims include all of the features of the respective independent claim from which they directly or indirectly depend. Therefore, the dependent claim should be allowable for at least the same reasons that independent claims 1 and 7 are allowable. Therefore, withdrawal of the rejections of the dependent claims 2-6 and 8-12 is respectfully requested.

Allowance of this application is respectfully requested.

Respectfully submitted,

By: 

Paul M. Odell, Reg. No. 28,332

WOOD, PHILLIPS, KATZ, CLARK & MORTIMER
Citigroup Center, Suite 3800
500 West Madison Street
Chicago, Illinois 60661-2511
(312) 876-1800

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Paul M. Odell